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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/782,593	02/18/2004	Eric T. Martin	200208787-1	6308

22879 7590 08/25/2008  
HEWLETT PACKARD COMPANY  
P O BOX 272400, 3404 E. HARMONY ROAD  
INTELLECTUAL PROPERTY ADMINISTRATION  
FORT COLLINS, CO 80527-2400

EXAMINER
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THOMAS, BRANDI N

ART UNIT	PAPER NUMBER
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2873

NOTIFICATION DATE	DELIVERY MODE
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08/25/2008

ELECTRONIC

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

JERRY.SHORMA@HP.COM  
mkraft@hp.com  
ipa.mail@hp.com

<b>Office Action Summary</b>	<b>Application No.</b> 10/782,593	<b>Applicant(s)</b> MARTIN ET AL.	
	<b>Examiner</b> BRANDI N. THOMAS	<b>Art Unit</b> 2873	

**-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --**

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 30 May 2008.
- 2a) ☐ This action is **FINAL**.                      2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 13-19 and 34 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 13-19 and 34 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 18 February 2004 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All    b) ☐ Some \*    c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- |  |   |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)          | 4) <input type="checkbox"/> Interview Summary (PTO-413)           |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____                                      |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)          | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date _____  | 6) <input type="checkbox"/> Other: _____                          |

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**DETAILED ACTION**

***Response to Amendment***

1. Applicant's request for reconsideration of the finality of the rejection of the last Office action is persuasive and, therefore, the finality of that action is withdrawn.

2. In view of the appeal brief filed on 5/30/08, PROSECUTION IS HEREBY REOPENED. A new ground of rejection set forth below.

To avoid abandonment of the application, appellant must exercise one of the following two options:

(1) file a reply under 37 CFR 1.111 (if this Office action is non-final) or a reply under 37 CFR 1.113 (if this Office action is final); or,

(2) initiate a new appeal by filing a notice of appeal under 37 CFR 41.31 followed by an appeal brief under 37 CFR 41.37. The previously paid notice of appeal fee and appeal brief fee can be applied to the new appeal. If, however, the appeal fees set forth in 37 CFR 41.20 have been increased since they were previously paid, then appellant must pay the difference between the increased fees and the amount previously paid.

A Supervisory Patent Examiner (SPE) has approved of reopening prosecution by signing below:

/Ricky L. Mack/  
Supervisory Patent Examiner  
Art Unit 2873

***Claim Rejections - 35 USC § 103***

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

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(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

4. Claims 13-19 and 34 are rejected under 35 U.S.C. 103(a) as being unpatentable over Martin et al. (2004/0218341 A1) further in view of Wessel et al. (6774719 B1).

Regarding claims 13 and 34, Martin et al. discloses in figures 1 and 4, a method of controlling a gap (48) between at least one fixed plate (42) and an electrostatically movable plate (44) in a MEMS device (34) (sections 0013 and 0014), comprising: to represent a desired gap (48) between the fixed plate (42) and the electrostatically movable plate (44) (section 0014); selectively routing a charge which is a function of the controlled current output and the modulated time to array elements (N and M) each including control circuitry (40) and one of the plurality of electro-mechanical devices (34) (figure 4 and section 0045); and displacing the electrostatically movable plate (44) in response to the controlled current output (section 0013) but does not specifically disclose time modulating a control signal to a controlled current output that is variable voltage compliant. Wessel discloses time modulating a control signal to a controlled current output that is variable voltage compliant (col. 2, lines 19-29). Therefore it would have been obvious to one having ordinary skill in the art at the time of the invention to combine the device of Martin et al. with the time modulation of Wessel et al. for the purpose of allowing the substantially constant adjusted output capacitance to be provided even while the output capacitance of the power amplifier is changing (col. 2, lines 19-29).

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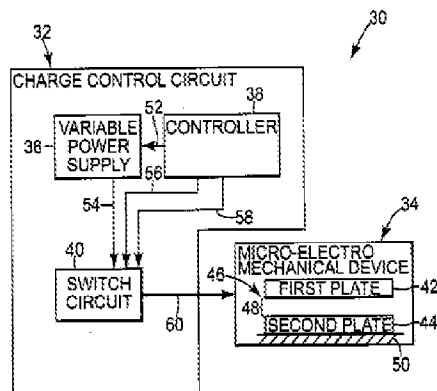


Fig. 1

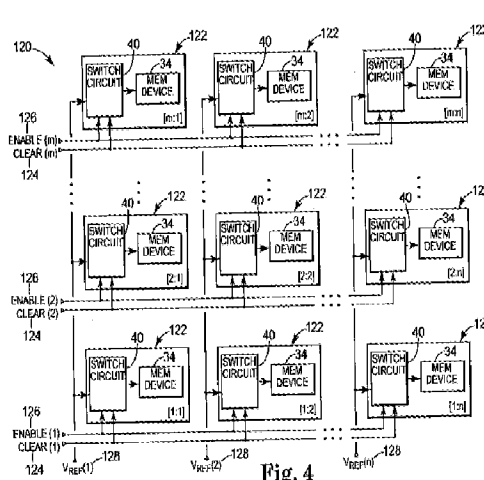


Fig. 4

Regarding claim 14, Martin et al. discloses in figures 1 and 4, a method of controlling a gap (48) between at least one fixed plate (42) and an electrostatically movable plate (44) in a MEMS device (34) (sections 0013 and 0014), wherein selectively routing a charge comprises selectively mirroring a reference current onto a controlled current output coupled to the MEMS device (34) on the basis of the time modulated control signal (section 0014).

Regarding claim 15, Martin et al. discloses in figures 1 and 4, a method of controlling a gap (48) between at least one fixed plate (42) and an electrostatically movable plate (44) in a MEMS device (34) (sections 0013 and 0014), wherein selectively mirroring the reference current selectively mirrors the reference current onto a plurality of controlled current outputs, each of the plurality of controlled current outputs being coupled to one of a plurality of MEMS devices (section 0045), and wherein displacing the electrostatically movable plate displaces an electrostatically movable plate (44) in each of the plurality of MEMS devices (34) in response to a corresponding controlled current output (section 0046).

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Regarding claim 16, Martin et al. discloses in figures 1 and 4, a method of controlling a gap (48) between at least one fixed plate (42) and an electrostatically movable plate (44) in a MEMS device (34) (sections 0013 and 0014), further comprising: generating the reference current (section 0046).

Regarding claim 17, Martin et al. discloses in figures 1 and 4, a method of controlling a gap (48) between at least one fixed plate (42) and an electrostatically movable plate (44) in a MEMS device (34) (sections 0013 and 0014), further comprising: adjusting the reference current to represent the desired gap (48) between the fixed plate (44) and the electrostatically movable plate (42) (sections 0014 and 0046).

Regarding claim 18, Martin et al. discloses in figures 1 and 4, a method of controlling a gap (48) between at least one fixed plate (42) and an electrostatically movable plate (44) in a MEMS device (34) (sections 0013 and 0014), wherein selectively mirroring the reference current onto the controlled current output generates a variable voltage compliant controlled current output (sections 0014 and 0046).

Regarding claim 19, Martin et al. discloses in figures 1 and 4, a method of controlling a gap (48) between at least one fixed plate (42) and an electrostatically movable plate (44) in a MEMS device (34) (sections 0013 and 0014), further comprising selectively setting a predetermined charge in the MEMS device (34) before displacing the electrostatically movable plate (42) in response to the controlled current output (sections 0014 and 0046).

### ***Response to Arguments***

5. Applicant's arguments with respect to claims 13-19 and 34 have been considered but are moot in view of the new ground(s) of rejection.

***Conclusion***

Any inquiry concerning this communication or earlier communications from the examiner should be directed to BRANDI N. THOMAS whose telephone number is (571)272-2341. The examiner can normally be reached on Monday - Thursday from 6-4:30.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Ricky Mack can be reached on 571-272-2333. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Brandi N Thomas/  
Examiner  
Art Unit 2873

BNT  
August 14, 2008

/Ricky L. Mack/  
Supervisory Patent Examiner, Art Unit 2873